

REGIONAL LOCAL HEALTH NETWORKS / RURAL SUPPORT SERVICE

Work Instruction

Continuous Glucose Monitoring (CGM) Ambulatory Clinical Service

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Sponsor: Chief Clinical Advisor, Rural Support Service

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RMC LHN Operational Clinical Governance Committee on: 16/02/2023

Y&N LHN Operational Clinical Governance Committee on: 18/05/2023

Next review due: 01/11/2026

Summary	This work instruction aims to articulate the systems and processes of the regional LHN Diabetes Service Continuous Glucose Monitoring (CGM) Ambulatory Clinical Service.
Policy/procedure reference	This work instruction supports the Nursing and Midwifery Board of Australia: Nurses Code of Professional Conduct for Nurses in Australia (2016), Code of Ethics (2013) and Standards for Practice (2014), the SA Health Policy Directive: The Governance Framework for Advanced Scope of Practice (2013), and the CHSA Care Continuum Foundation Policy (2011).
Keywords	Clinical, work instruction, LHN, diabetes, continuous glucose monitor, CGM, subcutaneous insulin infusion, insulin pump, CSII.
Document history	Is this a new LHN work instruction? Y Does this work instruction <i>amend or update</i> an existing work instruction? Y <i>Regional LHN Protocol (Clinical) Continuous Glucose Monitoring (CGM) and Flash Glucose Monitoring (FGM) Ambulatory Service</i> Does this work instruction <i>replace</i> an existing document? N
Applies to	This work instruction applies to all regional LHN Executive, Nursing Directors, Community Health Managers, Credentialed Diabetes Educators, Diabetes Educators, Diabetes Link Nurses and Rural Support Service Diabetes Service Staff.
Objective file No	2023-05680

Version control and change history

Version	Date	Amendment	Amended by:
1.0	31/08/2018	Original version	Jane Giles, Advanced Nurse Consultant CHSA - Diabetes Service
2.0	07/11/2022	Reference to Flash Glucose Monitoring deleted, device and sensor information updated.	Collette Hooper, Nurse Practitioner, Rural Support Service - Diabetes Service

1. Overview

The aim of the regional LHN Diabetes Service Continuous Glucose Monitoring (CGM) Service is to facilitate access to CGM for people with diabetes with complex diabetes education and management needs.

The service will be delivered face to face, via videoconferencing or audioconferencing, with supplement information via email and or telephone as needed. Any regional LHN site will have access. The service will be accessible, clinically appropriate and evidence based.

This work instruction aims to articulate the systems and processes by which the diabetes service will fulfil the objectives of the service.

1.1 Work Instruction Details

Referral

- 1.1.1 All referrals should be directed to the [Country Referral Unit](#).
- 1.1.2 Referrals can also be received directly from endocrinologists, specialist physicians and/or paediatricians, allied health professionals, peoples with diabetes, their carers or from external agencies (e.g. government and non-government). Further information may be requested.
- 1.1.3 All people with diabetes referred for consideration of personal CGM systems must be assessed by a multi-disciplinary team either at the service site or in a shared care arrangement with regional and/or metropolitan diabetes services. This team is to include an:
 - > endocrinologist, specialist physician and/or paediatrician
 - > diabetes specialist nurse (e.g. credentialled diabetes educator (CDE) or diabetes educator (DE)) and
 - > dietitian.
- 1.1.4 All people with diabetes referred for consideration of professional (loan) CGM systems must be assessed using the regional LHN Patient Selection Criteria.
- 1.1.5 Details of all people with diabetes utilising CGM systems and their progress is to be accessible to local regional LHN diabetes service staff.

Appointment, Bookings and Confirmation

- 1.1.6 The CDE/DE identifies CGM service required:
 - > **Personal CGM** to support people with type 1 diabetes to access the fully or partially subsidised CGM products through the National Diabetes Services Scheme (NDSS). Several appointments for resource acquisition, training and ongoing support will be required.
 - > **Professional CGM** which provides a period for retrospective and/or real-time data collection for people with diabetes who are unable to access the subsidised CGM products via the NDSS. A sensor application and removal appointment will be required.
- 1.1.7 The CDE/DE will confirm appointments. People requiring professional CGM to be provided with Rural Support Service (RSS) Diabetes Service CGM Fact Sheet.
- 1.1.8 Consolidated Country Client Management Engine (CCCME) booking is reported by CDE/DE providing the service.

Appointment Day

Personal CGM assessment appointment

1.1.9 People with diabetes referred for CGM are provided with an information package. This package is prepared by the CDE/DE and includes information pertaining to which CGM devices are currently available in Australia, NDSS criteria and registration and training required. CGM information can be sourced from:

- > Animas: www.amsl.com.au
- > Medtronic: www.medtronic-diabetes.com.au
- > Abbott: www.freestylelibre.com.au

1.1.10 Additional investigations may be requested, and these should be coordinated by the CDE/DE (e.g. blood glucose and/or blood ketone test, assessment of monitoring and/or injecting technique and/or administration site, foot assessment).

The CDE/DE may refer the person with diabetes and/or carer to the dietitian for assessment of diabetes self-management.

1.1.11 The CDE/DE is to inform the person with diabetes and/or carer of any financial cost of CGM including initial set up costs and ongoing subsidised costs of consumables via the NDSS or if not eligible for the subsidised products (e.g. does not have type 1 diabetes or has type 1 diabetes but is not a concession card holder).

1.1.12 A CDE/DE will assess the person's diabetes self-management using the regional LHN *Diabetes Assessment Form* (MR-DAF) or *Diabetes in Pregnancy Assessment Form* (MR-DIP). If the person is identified as not having the diabetes self-management skills or is unable to manage the CGM system safely, the CDE/DE must inform the referring endocrinologist, specialist physician or paediatrician, and document issues and outcomes of discussion in the medical record.

1.1.13 The CDE/DE to confirm commencement of CGM and assist the person with diabetes and/or carer to complete the relevant CGM Registration Form available via the [NDSS](#) website.

The CDE/DE will arrange the second appointment.

If the person with diabetes and/or carer choose not to proceed, the CDE/DE is to document this decision and reasoning in the medical record and send a letter to the referring endocrinologist, specialist physician or paediatrician to inform.

Subsequent personal CGM education and application appointments

1.1.14 The CDE/DE will;

- a. provide further education in relation to diabetes self-management as required, installation of software on smart phone/s and education on CGM requirements in accordance to the CGM Product Training Guides.
- b. encourage the person with diabetes and/or carer to install CGM computer software on their home computer and make these reports available to the endocrinologist, specialist physician or paediatrician via linkage to professional healthcare software accounts. The reports can be printed or sent as a pdf prior to appointments.
- c. continue to facilitate appointments with the person with diabetes and/or carer until assessed as safe to obtain apply the CGM sensor, start the CGM sensor, remove the CGM sensor, upload data. The CDE/DE is to identify instructions areas of concern on data analysis (e.g. hypoglycaemic and hyperglycaemic events) and see recommendations from the referring endocrinologist, specialist physician or paediatrician.

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- d. reinforce information provided by the Women's and Children's Hospital to the child, young person and/or carer (e.g. *Getting started with your Medtronic Continuous Glucose Monitor* (Appendix 2) and *Getting started with your Dexcom Continuous Glucose Monitor* (Appendix 3)) or recommend contact be made.
- e. Make available additional information relating to CGM system use during physical activity, at school and when driving can be accessed in the Association of Children's Diabetes Clinicians (2017) *A Practical Approach to the Management of Continuous Glucose Monitoring (CGM)/Real-Time Flash Glucose Scanning (FGS) in Type 1 Diabetes Mellitus in Children and Young People Under 18 years Guideline* available [here](#).
- f. document all education provided in the medical record. If issues are identified that impact on the person with diabetes' self-management or ability to manage the CGM system safely, the CDE/DE must inform the referring endocrinologist, specialist physician and paediatrician, and document issues and outcomes of discussion with the in the medical record.
- g. reiterate that the ordering and acquisition of the ongoing CGM consumables is the responsibility of the person with diabetes and/or carer.
- h. Inform that the NDSS fully or partially subsidised CGM consumables may not be routinely available at all NDSS outlets (e.g. community pharmacies). The CDE/DE is to encourage people with diabetes and/or their carers to notify their community pharmacy about their supply needs in order to ensure supplies are in stock and available.

1.1.15 The CDE/DE is;

- a. not responsible for the purchase the CGM related consumables for personal use.
- b. responsible for ensuring the person with diabetes and/or carer has an emergency backup plan and emergency contact details (e.g. 24 hour CGM Technical Support).

Personal CGM upgrade

1.1.16 The CDE/DE;

- a. is to discuss the process for upgrading their CGM system. People with diabetes eligible for the NDSS CGM program, can upgrade at any time and at no additional cost. NDSS CGM Access Forms to update or cease access are available via the [NDSS](#) website.
- b. not responsible for the cost of upgrading CGM systems nor related consumables for people with diabetes and/or carers who do not meet the NDSS CGM Program Eligibility Criteria.
- c. Inform the person who does not meet the NDSS CGM Program Eligibility Criteria, an CGM system upgrade can occur but at the individual's expense. The process for upgrade is as described in assessment and subsequent appointments.

Professional CGM

1.1.17 The CDE/DE

- a. is responsible for the purchase of the professional CGM system and related consumables.
- b. is responsible for the ongoing maintenance of the specific CGM system in accordance to the product user guide.
- c. will discuss with the person with diabetes and/or carer the professional CGM and period of reporting with to the specific CGM system used
- d. will apply the CGM system sensor in accordance to the specific CGM system product user guide.
- e. will remove the CGM system sensor and dispose of the used sensor in an Australian safety standards approved sharps container which is puncture proof and has a secure lid.

1.1.18 The professional CGM system and sensor is provided free of charge to people with diabetes who met the regional LHN CGM Selection Criteria. Repeat Professional CGM for diagnostic use can be offered.

The CDE/DE is responsible for ordering CGM systems, specific consumables, and storage of CGM sensors.

CGM data reporting

1.1.19 The CDE/DE

- a. will be responsible for the uploading of data accordance to the specific CGM system used and generate a report.
- b. will generate a report and identify Australian Diabetes Society [Ambulatory Glucose Profile - Consensus Position Statement](#) and recommendations minimum summary data:
 - > sensor capture data completeness
 - > low glucose events
 - > estimated HbA1c: % or mmol/mol
 - > time below glucose target
 - > time in glucose target
 - > time above glucose target
 - > % co-efficient of variation (CV) and standard deviation (SD)
 - > and individual day data graphs.
- c. may request additional information to be used in conjunction with the generated report.

Subsequent action

1.1.20 The CDE/DE

- a. is responsible for the identification of hypoglycaemia, investigation of causes and discussion of prevention strategies and hypoglycaemia action plan (including instructions for insulin titration outlined by the referring endocrinologist, specialist physician or paediatrician)
- b. is responsible in the identification of hyperglycaemia, investigation of causes and discussion of prevention strategies and hyperglycaemia (sick day) action plan (including instructions for insulin titration outlined by the referring endocrinologist, specialist physician or paediatrician).
- c. is to take urgent action and make contact the referring endocrinologist, specialist physician or paediatrician in the event clinically significant and/or severe hypoglycaemia (recurrent hypoglycaemia, hypoglycaemia unawareness) or hyperglycaemia (e.g. generalised hyperglycaemia, risk of diabetic ketoacidosis, hyperglycaemia hyperosmolar state) and if instructions for insulin titration are unavailable.
- d. in the event that the CDE/DE is not required to make urgent contact with the referring endocrinologist, specialist physician and paediatrician, the CDE/DE will ensure that the person with diabetes and/or carer has a follow up appointment to discuss the data report.
- e. is responsible for providing a copy of the CGM data reports to the referring endocrinologist, specialist physician or paediatrician and to the person with diabetes and/or carer. A copy of the data report generated should also be included into the medical record and may be sent to the local general practitioner if requested.
- f. may reinforce information provided by the Women's and Children's Hospital to the child, young person and/or carer (e.g. *Getting started with your Medtronic Continuous Glucose Monitor* and *Getting started with your Dexcom Continuous Glucose Monitor*) or recommend contact be made.
- i. may provide additional information relating to CGM system use during physical activity, at school and when driving can be accessed in the Association of Children's Diabetes Clinicians (2017) *A Practical Approach to the Management of Continuous Glucose Monitoring (CGM)/Real-Time Flash Glucose Scanning (FGS) in Type 1 Diabetes Mellitus in Children and Young People Under 18 years Guideline* available [here](#).
- g. is responsible for ensuring the person with diabetes and/or carer has actions plans and emergency contact details as required.
- h. is to document all actions (including referrals), education and recommendations provided in the medical record. If, the CDE/DE makes urgent contact with the referring endocrinologist, specialist physician or paediatrician, the issues and outcomes of these discussion are also to be included in the medical record.

The CDE/DE is not responsible for organising a follow up appointment with the Endocrinologist or Specialist Physician.

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2. Evaluation criteria

Compliance with this protocol will be monitored by RSS Diabetes Service via the following mechanisms:

- > bi-annual review of this protocol
- > regular review of feedback from service sites.

3. Linked documents

Diabetes Assessment Form (MR-DAF) (order via the SA Distribution Centre)
Diabetes in Pregnancy Assessment Form (MR-DIP) (order via the SA Distribution Centre)
CHSA Consumer Consent Form - MR82CH
RSS Diabetes - Continuous Glucose Monitoring and Flash Glucose Monitoring Factsheet
Women's and Children's Hospital Getting started with your Dexcom Continuous Glucose Monitor Information
Women's and Children's Hospital Getting started with your Dexcom Continuous Glucose Monitor Information

4. References

Australian Diabetes Society (2022) <i>Consensus Position Statement on: Utilising the Ambulatory Glucose Profile (AGP) combined with the Glucose Pattern Summary to Support Clinical Decision Making in Diabetes Care.</i>
The National Institute of Clinical Excellence (2015) <i>Guideline on management of children and young people with type 1 and type 2 diabetes (NG18).</i>
The National Institute of Clinical Excellence (2016) <i>Diagnostics Guideline regarding the use of SAPT (DG21).</i>
Association of Children's Diabetes Clinicians (2017) <i>A Practical Approach to the Management of Continuous Glucose Monitoring (CGM) / Real-Time Flash Glucose Scanning (FGS) in Type 1 Diabetes Mellitus in Children and Young People Under 18 years.</i>
Diabetes UK (2017) Consensus Guideline for Flash Glucose Monitoring
Petrie JR, Peters AL, Bergenstal RM, Holl RW, Fleming GA, Heinemann L. <i>Improving the Clinical Value and Utility of CGM Systems: Issues and Recommendations: A Joint Statement of the European Association for the Study of Diabetes and the American Diabetes Association Diabetes Technology Working Group. Diabetes Care. 2017;40(12):1614-1621.</i>
International Consensus on Use of Continuous Glucose Monitoring. Diabetes Care 2017;40:1631–1640 https://doi.org/10.2337/dc17-1600

5. Accreditation standards

National Safety and Quality Health Service Standards (2nd edition)

1 <input checked="" type="checkbox"/>	2 <input checked="" type="checkbox"/>	3 <input type="checkbox"/>	4 <input checked="" type="checkbox"/>	5 <input checked="" type="checkbox"/>	6 <input checked="" type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>
Clinical Governance	Partnering with Consumers	Preventing & Controlling Healthcare Associated Infection	Medication Safety	Comprehensive Care	Communicating for Safety	Blood Management	Recognising & Responding to Acute Deterioration

Aged Care Quality Standards (includes home care clients)

1 <input checked="" type="checkbox"/>	2 <input checked="" type="checkbox"/>	3 <input checked="" type="checkbox"/>	4 <input checked="" type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input checked="" type="checkbox"/>
Consumer Dignity & Choice	Ongoing Assessment & Planning with Consumers	Personal Care & Clinical Care	Services & Supports for Daily Living	Organisation's Service Environment	Feedback & Complaints	Human Resources	Organisational Governance

National Disability Insurance Scheme (NDIS) Practice Standards

CORE MODULE				SUPPLEMENTARY MODULES	
1	2	3	4	1	2
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rights and Responsibilities	Governance and Operational Management	Provision of Supports (to participants)	Provision of Supports (environment)	High Intensity Daily Personal Activities Module	Early Childhood Supports Module

5. Consultation

Version	Consultation
1.0	SA Health Metropolitan Diabetes Services, CHSA Diabetes Specialist Nurse Network, CHSA Director of Endocrinology.
2.0	SA Health Metropolitan Diabetes Services, Regional Local Health Network Diabetes Specialist Nurse Network Membership.